

C L A I M S

What is claimed is:

1. 1. A generally cylindrical tool handle having a first end, a second end, and a generally cylindrical surface, the tool handle for accepting and holding any one of one or more tools of multiple sizes, wherein each tool includes an elongated rod having a bend through a predetermined angle and including a proximal end for engaging a workpiece, and a mounting end between the bend and a distal end, wherein the tool handle further includes a plurality of outer surface faces formed on the generally cylindrical surface, two or more of the outer surface faces having a holding slot integrally formed along the outer surface face for receiving the mounting end of a corresponding sized tool when the corresponding sized tool is engaged with the tool handle.
1. 2. The tool handle according to claim 1 wherein the holding slot comprises:
 2. a. one or more apertures each formed through a bottom of the holding slot and penetrating the tool handle; and
 2. b. one or more contoured compartments each configured for holding the mounting end of the tools of multiple sizes, each contoured compartment formed about a corresponding aperture,
wherein the corresponding sized tool is engaged with the tool handle by passing the proximal end through an appropriately sized aperture until the mounting end rests in the contoured compartment corresponding to the appropriately sized aperture.
1. 3. The tool handle according to claim 2 wherein each contoured compartment is configured to hold the mounting end of one or more tools within a defined range of sizes, and further wherein each corresponding aperture is configured to accept the proximal end of one or more tools within the defined range of sizes.

1 4. The tool handle according to claim 3 further comprising a movable lock configured for
2 selectively positioning on the generally cylindrical surface for irremovably confining the
3 mounting end to the contoured compartment corresponding to the appropriately sized aperture
4 when the corresponding sized tool is engaged with the tool handle.

1 5. The tool handle according to claim 4 further comprising:
2 a. a first surface barrier positioned on the generally cylindrical surface and at the
3 first end, the first surface barrier configured to allow the movable lock to pass
4 over the first surface barrier when approaching the first surface barrier from an
5 uncoupled direction and to prevent the movable lock from passing over the first
6 surface barrier when approaching the first surface barrier from a coupled
7 direction; and
8 b. a second surface barrier positioned on the generally cylindrical surface and at
9 the second end, the second surface barrier configured to prevent the movable
10 lock from passing over the second surface barrier when approaching the second
11 surface barrier from the coupled direction and from the uncoupled direction.

1 6. A tool handle having an outer surface for accepting and holding any one of one or
2 more tools of multiple sizes during use, each having a first segment and a second segment,
3 wherein the second segment is longer than the first segment, the tool handle comprising a
4 plurality of outer surface faces, each formed on the outer surface and configured to allow the
5 tool handle to engage an appropriate one of the tools of multiple sizes so that the appropriate
6 one of the tools penetrates a first outer surface face and a second outer surface face when
7 engaged with the tool handle, wherein two or more of the outer surface faces comprise a
8 holding slot integrally formed along the outer surface face for receiving the appropriate one of
9 the tools such that the first segment of the appropriate one of the tools rests within the
10 holding slot when the appropriate one of the tools is engaged with the tool handle.

1 7. The tool handle according to claim 6 wherein the holding slot comprises:
2 a. one or more apertures each formed through a bottom of the holding slot and
3 penetrating the tool handle; and
4 b. one or more contoured compartments each configured for holding the first
5 segment of the tools of multiple sizes, each contoured compartment formed
6 about a corresponding aperture,
7 wherein the appropriate one of the tools is engaged with the tool handle by passing the second
8 segment through an appropriately sized aperture until the first segment rests in the contoured
9 compartment corresponding to the appropriately sized aperture.

1 8. The tool handle according to claim 7 further comprising a lock configured for
2 selectively positioning on the outer surface for retaining the appropriate one of the tools
3 engaged to the tool handle.

1 9. A tool handle for accepting and holding any one of one or more tools of multiple
2 sizes, each tool having a first segment and a second segment, wherein the second segment is
3 longer than the first segment, the tool handle comprising:

4 a. a handle including a plurality of outer surface faces, two or more of the outer
5 surface faces having a holding slot integrally formed along a corresponding
6 outer surface face for receiving an appropriate one of the tools, wherein the
7 holding slot includes one or more apertures each formed through a bottom of
8 the holding slot and penetrating the handle for inserting therein the second
9 segment of a corresponding tool and one or more contoured compartments each
10 configured for holding the first segment of the corresponding tool; and
11 b. a movable lock configured for selectively positioning on the outer surface faces
12 of the handle for confining the first segment of the corresponding tool to the
13 contoured compartment.

1 10. The tool handle according to claim 9 wherein each contoured compartment is formed
2 about a corresponding aperture.

1 11. The tool handle according to claim 9 wherein the movable lock comprises a first edge,
2 a second edge, and a surface forming a cavity between the first edge and the second edge so
3 that the movable lock is coupled to the handle by inserting the handle through the cavity,
4 wherein the cavity has a shape corresponding to a shape of the handle.

1 12. The hexagonal tool handle according to claim 9 wherein the movable lock includes an
2 inner surface and an outer surface, wherein the inner surface has at least one recess located at
3 the first edge and at least one recess located at the second edge, each recess allowing the
4 movable lock to move pass a protruding portion of the first segment held in the contoured
5 compartment so that the first segment is confined to the contoured compartment by the
6 movable lock.

1 13. The tool handle according to claim 9 wherein the handle further comprises:

- 2 a. a first end positioned along the outer surface faces and having a first surface
3 barrier configured to allow the movable lock to pass over the first surface
4 barrier when approaching the first surface barrier from an uncoupled direction
5 and to prevent the movable lock from passing over the first surface barrier
6 when approaching the first surface barrier from a coupled direction; and
- 7 b. a second end positioned along the outer surface faces and having a second
8 surface barrier configured to restrict the movable lock from passing over the
9 second surface barrier when approaching the second surface barrier from the
10 coupled direction and from the uncoupled direction.

1 14. A tool holder for holding one or more tools of multiple sizes, each tool having a first
2 segment and a second segment, wherein the second segment is longer than the first segment,
3 and for holding a tool handle having a plurality of outer surface faces, the tool holder
4 comprising:

5 a. a tool holding member configured to hold the tools in a multiple group
6 arrangement such that the tools are securely held upon insertion into the tool
7 holding member, and wherein the first segment and the second segment
8 protrude from the tool holding member; and
9 b. a tool handle holding member coupled to the tool holding member and
10 configured to hold the tool handle adjacent to the multiple group arrangement.

1 15. The tool holder according to claim 14 wherein the tool holding member comprises:

2 a. a first upper surface;
3 b. a second upper surface offset from the first upper surface;
4 c. a first plurality of cavities each formed through the first upper surface and
5 penetrating the tool holding member along an insertion axis for inserting and
6 holding therein the second segment of a corresponding sized tool, wherein the
7 first plurality of cavities hold a first group of tools of multiple sizes; and
8 d. a second plurality of cavities each formed through the second upper surface and
9 penetrating the tool holding member along the insertion axis for inserting and
10 holding therein the second segment of a corresponding sized tool, wherein the
11 second plurality of cavities hold a second group of tools of multiple sizes.

1 16. The tool holder according to claim 15 wherein each cavity of the first and the second
2 plurality of cavities has a cross section dimension along the insertion axis which is smaller
3 than a dimension of a diameter of the second segment of the corresponding sized tool so that
4 the cavity provides resistance against insertion therein of the second segment of the

5 corresponding sized tool and against removal of the second segment of the corresponding
6 sized tool to securely hold the corresponding sized tool therein.

1 17. The tool holder according to claim 16 wherein the tool handle holding member
2 comprises an inner hollow shape corresponding to a shape of the tool handle for inserting the
3 tool handle therein such that when the tool handle is held by the tool handle holding member,
4 the outer surface faces of the tool handle are partially covered by the tool handle holding
5 member.

1 18. A tool set comprising:

2 a. a tool handle for engaging any one of one or more tools of multiple sizes, each
3 tool having a first segment and a second segment, the second segment being
4 longer than the first segment, the handle having a first end, a second end, and
5 one or more holding slots each integrally formed between the first end and the
6 second end, wherein each holding slot includes one or more contoured
7 compartments each configured to hold one or more tools within a defined range
8 of sizes; and

9 b. a first tool holder including:
10 i. first means for holding a first group of one or more tools of multiple
11 sizes securely upon insertion; and
12 ii. second means for holding coupled to the first means for holding and
13 configured for securely holding the tool handle.

1 19. The tool set according to claim 18 further comprising a second tool holder including:

2 a. third means for holding a second group of one or more tools of multiple sizes
3 securely upon insertion; and
4 b. fourth means for holding coupled to the third means for holding and configured
5 for securely holding the tool handle.

1 20. The tool set according to claim 19 wherein the first means for holding is configured to
2 mate with the fourth means for holding, and further wherein the third means for holding is
3 configured to mate with the second means for holding.

1 21. The tool set according to claim 20 wherein as the tool handle is inserted through each
2 of the second and fourth means for holding in a predetermined sequence, the first tool holder
3 and the second tool holder are aligned about an axis formed by the tool handle and thereby
4 form a compact arrangement.

1 22. The tool set according to claim 21 wherein the tool handle further comprises:
2 a. a first surface barrier positioned on the outer surface and at the first end, the
3 first surface barrier configured to allow each of the second and fourth means
4 for holding to pass over the first surface barrier when approaching the first
5 surface barrier from an uncoupled direction and to provide resistance against
6 the second and fourth means for holding passing over the first surface barrier
7 from a coupled direction; and
8 b. a second surface barrier positioned on the outer surface and at the second end,
9 the second surface barrier configured to prevent the second and the fourth
10 means for holding from passing over the second surface barrier when
11 approaching the second surface barrier from the coupled direction and from the
12 uncoupled direction.

1 23. The tool set according to claim 22 further comprising a movable lock configured for
2 selectively positioning on the outer surface of the tool handle for irremovably confining the
3 tool to the contoured compartment when the tool is engaged with the tool handle.

1 24. The tool set according to claim 23 wherein the first surface barrier is configured to
2 allow the movable lock to pass over the first surface barrier when approaching the first

3 surface barrier from the uncoupled direction and to prevent the movable lock from passing
4 over the first surface barrier when approaching the first surface barrier from the coupled
5 direction.

1 25. The tool set according to claim 24 wherein the second surface barrier is configured to
2 prevent the movable lock from passing over the second surface barrier when approaching the
3 second surface barrier from the coupled direction and from the uncoupled direction.

1 26. The tool set according to claim 25 further comprising a plurality of tools of multiple
2 sizes.

1 27. A tool set comprising:

- 2 a. a tool handle to engage any one of one or more tools of multiple sizes, each
3 tool having a first segment and a second segment, the second segment being
4 longer than the first segment, the handle having an outer surface and one or
5 more holding slots each integrally formed on the outer surface, wherein each
6 holding slot includes one or more contoured compartments each configured to
7 hold one or more tools within a defined range of sizes;
- 8 b. a movable lock configured to be selectively positioned on the outer surface of
9 the tool handle for irremovably confining the tool to the contoured
10 compartment when the tool is engaged with the tool handle;
- 11 c. a first tool holder comprising:
 - 12 i. a first tool holding member configured to hold a first group of one or
13 more tools of multiple sizes securely upon insertion; and
 - 14 ii. a first tool handle holding member coupled to the first tool holding
15 member and configured to hold the tool handle adjacent to the first tool
16 holding member; and

17 d. a second tool holder comprising:
18 i. a second tool holding member configured to hold a second group of one
19 or more tools of multiple sizes securely upon insertion; and
20 ii. a second tool handle holding member coupled to the second tool holding
21 member and configured to hold the tool handle adjacent to the second
22 tool holding member.

1 28. The tool set according to claim 27 wherein the first tool holding member is configured
2 to mate with the second tool handle holding member, and further wherein the second tool
3 holding member is configured to mate with the first tool handle holding member.

1 29. The tool set according to claim 28 wherein as the tool handle is inserted through each
2 of the tool handle holding members in a predetermined sequence, the first tool holder and the
3 second tool holder mate, form a compact arrangement, and are aligned about an axis formed
4 by the tool handle.

1 30. The tool set according to claim 29 wherein the tool handle further comprises a first
2 end and a second end.

1 31. The tool set according to claim 30 wherein the tool handle further comprises:
2 a. a first surface barrier positioned on the outer surface and at the first end, the
3 first surface barrier configured to allow the movable lock and each of the first
4 and second tool handle holding members to pass over the first surface barrier
5 when approaching the first surface barrier from an uncoupled direction, to
6 provide resistance against the first and the second tool handle holding members
7 passing over the first surface barrier from a coupled direction, and to prevent
8 the movable lock from passing over the first surface barrier from the coupled
9 direction; and

10 b. a second surface barrier positioned on the outer surface and at the second end,
11 the second surface barrier configured to prevent the movable lock and each of
12 the first and second tool handle holding members from passing over the second
13 surface barrier when approaching the second surface barrier from the coupled
14 direction and from the uncoupled direction.

1 32. The tool set according to claim 31 further comprising a plurality of tools of multiple
2 sizes.

1 33. A tool set comprising:
2 a. a tool handle to engage any one of one or more tools of multiple sizes, each
3 tool having a first segment and a second segment, the second segment being
4 longer than the first segment, the handle having a first end, a second end, and
5 one or more holding slots each integrally formed between the first end and the
6 second end, wherein each holding slot includes one or more contoured
7 compartments each configured to hold one or more tools within a defined range
8 of sizes; and
9 b. a tool holder including:
10 i. a tool holding member configured to hold one or more tools of multiple
11 sizes securely upon insertion; and
12 ii. a tool handle holding member coupled to the tool holding member and
13 configured to hold the tool handle adjacent to the tool holding member.

1 34. The tool set according to claim 33 further comprising a movable lock configured to be
2 selectively positioned on the outer surface of the tool handle for irremovably confining the
3 tool to the contoured compartment when the tool is engaged with the tool handle.

PATENT

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1 35. The tool set according to claim 34 further comprising a plurality of tools of multiple
2 sizes.